

at regular intervals. Yellow candles will be used as much as possible by day.

It may be impossible for a submarine to fire smoke candles. Correspondingly, a partially-flooded submarine may have only a certain number of smoke candles available and searching ships should not therefore expect many to appear.

Since oil slicks or debris may be the only indication of the presence or whereabouts of the sunken submarine, it is vitally important that surface ships refrain from discharging anything which might appear to have come from a submarine while they are in the probability area. Searching ships and aircraft can waste many valuable hours in investigating these false contacts.

Some Australian submarine pyrotechnics can be fitted with message carriers. If a message has been attached, the pyrotechnic will be fitted with a dye marker, giving off a yellowish-green color on the surface. Such a pyrotechnic should be recovered as soon as it has finished burning.

Collins class submarines are fitted with a Submarine Launched EPIRB (SERB), which will be described later in this section.

In any submarine accident, time is the most vital factor affecting the chances of rescue of survivors, and, as the sighting of an indicator buoy may be the first intimation that an accident has in fact occurred, it is vital that no time should be lost in taking action. The sighting of any beacon should at once be reported by the quickest available means to the Rescue Coordination Centre Australia, the Navy, or the police. However, if vessels are unable to establish communications without leaving the vicinity of the submarine, it should be borne in mind that the primary consideration should be for vessels to remain standing by to rescue survivors and not leave the scene of the accident. Every effort should be made to include in the report the serial number of the beacon; this number is affixed on top of the SERB.

At any time after a submarine accident, survivors may start attempting to escape. Current policy dictates that survivors will wait before escaping, as follows:

1. Until rescue vessels are known to be standing by.
2. Conditions inside the submarine deteriorate to such an extent that an escape must be attempted.

It should be noted that, in certain circumstances, the latter situation may not arise through lack of air supply until several days after the accident. However, if the submarine is badly damaged, survivors may have to make an escape attempt immediately. Any ship finding a SERBN should not therefore leave the position but stand by well-clear ready to pick up survivors.

On arrival at the surface, crewmembers may be exhausted or ill, and, if circumstances permit, the presence of a boat already lowered is very desirable. Some crewmembers may require a recompression chamber. Therefore, it is the aim of the authorities to get such a chamber to the scene as soon as possible.

In order that those trapped in the submarine shall be made aware that help is at hand, naval vessels drop small charges into the sea which can be heard from inside the submarine. There is no objection to the use of small charges for this purpose, but it is vital that they are not dropped too close

since crewmembers in the process of making ascents are particularly vulnerable to underwater explosions, and may easily receive fatal injuries. A distance of about 0.3 mile is considered to be safe.

If no small charges are available, the running of an echo sounder or the banging of the outer skin of the ship's hull with a hammer from a position below the waterline are likely to be heard in the submarine, and such banging and/or sounding should therefore be carried out at frequent intervals.

Submarine Emergency Radio Beacon (SERB)

The SERB is made of aluminum, colored orange, and is cylindrical in shape, with two whip aerials. The beacon is fitted with an automated transmitting unit, with a battery life of 48 hours, and operating on the following frequencies:

- a. 406.025 MHz—Cospas/Sarsat.
- b. 243 MHz—Military Air Guard.
- c. 121.5 MHz—Civil Air Guard.

Submarine Launched Expendable Communications Buoy (ECB)

This buoy is used for tactical communications between submarines and other warships/aircraft. It can, however, be fired in an emergency default mode, in which case it will transmit a SABRE tone on 243MHz Military Air Guard.

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